

MAXIBOR

Borehole Survey System



Features

- Solid state tool and simple to operate
- Fully automated measurement and presents results immediately on site
- Accuracy better than 1:1000
- Measures holes from 46 mm diameter



Field of application

The survey of borehole direction shows the run of a drilling.

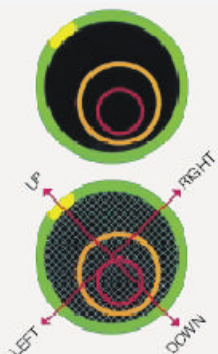
The Maxibor System is the ultimate tool for inclined and horizontal boreholes equipped with casing or even for the use in bore rods. With certain restrictions the use in uncased boreholes in compact rock is possible.

It is possible to get a rough first result immediately after the measurement on the site. The detailed numerical and graphical results are generally available within 24 hours.



Principle of function

An electronic camera measures with three rings the vertical and horizontal displacement. The liquid level in the first ring is used as direction indicator. After moving the probe one gauge length (= 1 ring) down the hole the next values are measured.



The measurement shows the exact run of a drilling. For the orientation in a coordinate system, the initial bend and the start azimuth has to be defined by a surveyor or engineer.

Compared to other measuring methods, Maxibor uses neither gyros nor accelerometers and has no instrument creep, drift corrections or calibration errors.



Measurement Method

At the start, an electronic camera views two reflector rings, three and six meters along the probe. With the bubble indicating "up", it is easy to see the direction of the bend. It has to be started from a known position (coordinates and probe bending).

A microprocessor records the vertical and horizontal displacements of each ring. Move the probe three meters down the hole and the camera will image and record the next station. This procedure is repeated to the end of the hole. In dependence of the direction, the use of connecting rods or ropes is possible.

As soon as you recover the probe from the borehole the data can be transmitted to a PC. Later full colour graphics can be created for a simple interpretation.

For accurate results an exact centralisation in the borehole is necessary.



Specification

range	Neigung ¹⁾	from ± 2 (better 5) ^o
	Azimut	360 ^o
accuracy	Neigung	$\pm 0.5^{\circ}$ ^{2) 3)}
	Azimut	$\pm 0.5^{\circ}$ ^{2) 3)}
interval		3.0 or 1.5m
dimensions	diameter	45mm
	length	8.1 or 6.1m ⁴⁾
weight		32 or 22 kg ⁴⁾

1) regarding the vertical

2) with optional conditions (cased borehole, horizontal bending, diameter absolutely constant)

3) in addition to inaccuracy of start angles

4) per measuring interval

